

WEATHER OF THE ATLANTIC AND PACIFIC OCEANS

[By the Marine Division, W. F. McDONALD, in charge]

NORTH ATLANTIC OCEAN

By W. F. McDONALD

The normal pressure distribution over the Atlantic was considerably disturbed during August, 1931, especially in the latter half of the month. Extensive development of the usual Atlantic high prevailed only during rather brief periods, comprising a few days at the beginning and end of the month and the interval between the 10th and 15th.

Even in this period, however, while high pressure conditions were dominant over most of the Atlantic, there was a storm development near the American coast, and the American steamship *Onondaga* encountered a gale of force 10, approaching New York from the southward on August 11. This disturbance did not show further development or progress, however, but diminished and disappeared within the next two days; but simultaneously with its disappearance there was development of a vigorous depression southeast of lower Greenland, which moved slowly southeastward deepening as it progressed. On the 13th the American steamship *Seattle Spirit*, bound from Bremen to Boston, ran into winds of gale force that culminated on the 14th in the strongest winds reported from any part of the Atlantic during the month (force 11), and this same disturbance moved over the British Isles with diminished intensity on the 17th, causing some damage by high winds and heavy rains.

A succession of slow-moving disturbances then began to cross the Atlantic, and it was not until the month was well along that the high reestablished itself over the western part of the ocean, while there remained several sharp disturbances over the eastern portion of the main steamer routes. Considering the season, an unusual number of gales was reported between the 15th and 27th, with several ships encountering winds of force 10 in the eastern Atlantic. Press reports indicated that several passenger liners were diverted or slightly delayed in making their schedules.

The average pressure situation for the month as a whole (see Table 1) reflected this concentration of low movements across mid-ocean on paths more southerly than usual, in that averages were below normal over most of the area between 30° and 50° N. latitude, and above normal in surrounding areas, with the greatest excess lying to eastward of Greenland.

August was free from serious West Indian disturbances, although two very mild depressions were noted in the Caribbean Sea in the period from the 11th to the 17th. The first of these crossed the full length of the Caribbean from east to west, moved into Yucatan on the 16th, and passed near Frontera, Mexico, on the next day when the Honduran steamship *Morazan*, lying in port at Frontera, experienced a gale of force 9, together with a wind change characteristic of the central area of a tropical disturbance.

Fogs on the north Atlantic during August were confined, so far as our reports indicate, to areas north of latitude 40. They decreased greatly as compared with the previous month, being most extensive between the Grand Banks and the vicinity of Nantucket from the 7th to the 16th, with rather extensive foginess still earlier in the month between the Grand Banks and the British Isles.

The reports indicate a great decrease in foginess after the 17th with occurrence mainly in scattered banks and patches rather than in widespread blanketing of the steamer routes. It is worthy of note that the great reduction in fog appears to have been about coincident with the appearance of the series of disturbances noted above, which marked the disruption of the normal pressure distribution over the Atlantic.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure (sea level) at selected stations for the North Atlantic Ocean and its shores, August, 1931

Stations	Average pressure	Departure	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Julianehaab, Greenland ¹	29.98	-----	30.32	20th.....	29.65	2d.
Reykjavik, Iceland ¹	29.94	0.13	30.32	29th.....	29.36	26th.
Lerwick, Shetland Isles ¹	29.95	0.15	30.36	29th.....	29.46	16th.
Valencia, Ireland ¹	29.90	-0.02	30.42	11th.....	28.95	16th.
Lisbon, Portugal ¹	30.06	0.04	30.36	22d.....	29.83	24th.
Madeira ¹	30.09	0.07	30.28	30th.....	29.96	4th.
Horta, Azores ¹	30.11	-0.09	30.31	1st.....	29.74	25th.
Belle Isle, Newfoundland ¹	29.94	0.05	30.30	13th.....	29.22	1st.
Halifax, Nova Scotia ¹	30.00	-0.01	30.36	14th.....	29.70	10th.
Nantucket ²	30.01	0.02	30.40	14th.....	29.64	10th.
Hatteras ²	30.04	0.04	30.32	15th.....	29.74	10th.
Bermuda ¹	30.13	-0.01	30.36	13th.....	30.00	6th.
Turks Island ¹	30.10	0.06	30.14	2d.....	29.02	7th.
Key West ²	30.03	0.05	30.12	24th.....	29.92	14th.
New Orleans ²	30.06	0.08	30.25	24th.....	29.89	10th.

¹ All data based on a. m. observations only, with departure computed from best available normals related to time of observation.

² Corrected 24-hour means, based on more than one observation daily.

OCEAN GALES AND STORMS, AUGUST, 1931

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN													
General Greene, Am. S. S.	St. Johns.....	Labrador.....	59 28 N	44 28 W	Aug. 1	11 p., 2.....	Aug. 2	29.00	NE.....	NE.....	N.....	ENE, 9.....	NE-N.
West Harcarvar, Am. S. S.	Bremen.....	Boston.....	53 30 N	39 52 W	Aug. 2	1 a., 2.....	do.....	29.46	SSW.....	SW, 7.....	SW.....	SW, 8.....	
Baron Kelvin, Br. S. S.	Cape Town.....	Calais.....	47 25 N	5 40 W	Aug. 8	8 a., 8.....	Aug. 9	29.47	NW.....	WNW, 8.....	WSW.....	NNW, 8.....	NW-W-NNW.
Onondaga, Am. S. S.	Canal Zone.....	New York.....	39 37 N	73 50 W	Aug. 11	6 p., 11.....	Aug. 12	29.69	NNE.....	NNE.....	N.....	NNE, 10.....	
Lustrous, Br. S. S.	Houston.....	Hamburg.....	47 22 N	33 00 W	Aug. 12	10 a., 12.....	do.....		SW.....	SW, 7.....	N.....	SW, 8.....	SW-N.
Seattle Spirit, Am. S. S.	Bremen.....	Boston.....	50 20 N	20 00 W	Aug. 13	8 a., 14.....	Aug. 15	29.03	NW.....	NW, 11.....	NNW.....	NW, 11.....	
Sholan, Am. S. S.	New York.....	Los Angeles.....	15 15 N	76 10 W	do.....	4 a., 14.....	Aug. 14	29.86	E.....	E, 9.....	E.....	E, 9.....	
Lustrous, Br. S. S.	Houston.....	Hamburg.....	49 17 N	15 50 W	do.....	Noon, 15.....	Aug. 17		NW.....	WNW, 8.....	SW.....	WSW, 9.....	NW-W.
Boston City, Br. S. S.	Bristol.....	Wilmington.....	51 20 N	7 26 W	Aug. 15	8 a., 16.....	do.....	29.96	S.....	SSW, 8.....	WSW.....	SSW, 8.....	SSW-WSW.
New York, Gr. S. S.	Cherbourg.....	New York.....	49 45 N	12 00 W	do.....	4 p., 15.....	Aug. 15	28.85	SW.....	SW, 9.....	WNW.....	SW, 9.....	SSW-WSW.
Jason, Du. S. S.	Amsterdam.....	Canal Zone.....	47 01 N	9 19 W	do.....	do.....	Aug. 16	29.25	SW.....	WSW, 8.....	W.....	WSW, 8.....	WSW-WNW.
Berlin, Gr. S. S.	Bremerhaven.....	New York.....	49 53 N	10 54 W	do.....	12 mid., 15.....	do.....	29.16	SW.....	SW, 8.....	W.....	W, 9.....	S-W.
Morazan, Hon. S. S.	New Orleans.....	Mexico.....	18 38 N	92 44 W	Aug. 17	Mid., 17.....	Aug. 17	29.74	NW.....	NW, 8.....	S.....	NW, 9.....	NW-S.
Statendam, Du. S. S.	New York.....	Rotterdam.....	42 16 N	49 50 W	do.....	2 p., 18.....	Aug. 18	29.52	NNW.....	ESE, 5.....	S.....	ENE, 8.....	NE-E.

OCEAN GALES AND STORMS, AUGUST, 1931—Continued

Vessel	Voyage		Position at time of lowest barometer		Gale began	Time of lowest barometer	Gale ended	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN—Continued													
Independence Hall, Am. S. S.	Bordeaux	New York	47 00 N	8 48 W	Aug. 19	8 a., 19	Aug. 20	Inches 29.52	W	WSW, —	WNW	WNW, 9	WSW-WNW.
De Grasse, Fr. S. S.	Plymouth	do.	44 24 N	46 15 W	do.	6 p., 19	do.	29.78	SW	WSW, 6	WNW	WNW, 8	WSW-WNW.
Jean Jadot, Bel. S. S.	New York	Antwerp	44 23 N	43 35 W	do.	4 p., 20	Aug. 21	29.67	WNW	W, 9	N	NNW, 9	W-NNW.
Brave Coeur, Am. S. S.	New Orleans	London	38 12 N	69 24 W	Aug. 22	Aug. 25	Aug. 25	29.91	NE	NE, 7	SSW	E, 8	NE-SE-SSW.
Selma City, Am. S. S.	Canal Zone	Portsmouth	38 01 N	72 18 W	do.	2 p., 22	Aug. 23	29.90	NE	NE, 8	NE	NE, 8	ENE-NE.
Binnendijk, Du. S. S.	Port Said	Boston	41 29 N	28 38 W	Aug. 24	6 a., 25	Aug. 25	29.41	S	S, 8	NW	N, 9	SSE-S-N.
Cerinthus, Br. S. S.	France	Port Arthur	40 38 N	27 32 W	do.	9 a., 25	Aug. 26	29.40	SSE	SSW, 6	NNW	NNW, 8	SSW-NNW.
Middleham Castle, Br. S. S.	Antwerp	Corpus Christi	49 30 N	4 45 W	do.	10 p., 24	Aug. 25	29.25	SE	NE, 8	NNE	E, 9	SE-NNE.
Asia, Dan. T. S.	do.	Cristobal	49 30 N	5 50 W	do.	—, 24	do.	29.20	E	ENE, 10	NE	ENE, 10	ESE-ENE.
Do.	do.	do.	47 05 N	21 45 W	Aug. 25	—, 25	Aug. 27	29.12	SE	SE, 5	N	N, 10	S-SE-NW.
West Harshaw, Am. S. S.	London	New Orleans	42 55 N	22 45 W	do.	Noon, 25	do.	29.54	S	SSW, 9	WNW	SSW, 9	S-SW.
Barbadian, Br. S. S.	Liverpool	Bermuda	44 10 N	22 42 W	do.	8 p., 25	do.	29.00	SE	S, 7	N	W, 10	S-W.
Hybert, Am. S. S.	Bremen	Tampa	44 45 N	22 35 W	do.	10 a., 26	do.	29.04	SSE	SSW, 9	NW	SSW, 9	SSE-SW-NW.
Middleham Castle, Br. S. S.	Antwerp	Corpus Christi	42 30 N	17 15 W	Aug. 26	4 p., 27	Aug. 28	29.71	SE	SW, 7	WNW	W, 8	SE-WNW.
Baron Kelvin, Br. S. S.	Swansea	Providence	50 20 N	26 52 W	do.	Noon, 26	Aug. 27	29.79	E	NE, —	NNW	NE, 9	
France, Fr. S. S.	New York	Le Havre	49 10 N	22 19 W	do.	6 a., 26	do.	29.55	NNE	ENE, 7	E	ENE, 9	
NORTH PACIFIC OCEAN													
Liberator, Am. S. S.	Honolulu	Shanghai	30 14 N	129 25 E	Aug. 17	Noon, 17	Aug. 18	29.80	SE	SE, —	S	SE, 9	SE-S.
Tamaha, Br. S. S.	Shanghai	San Pedro	31 45 N	123 50 E	Aug. 24	4 p., 25	Aug. 27	29.30	NE	ESE, —	SW	S, 10	E-ESE.
San Diego Maru, Jap. M. S.	Yokohama	Los Angeles	43 14 N	173 40 W	Aug. 27	8 p., 27	Aug. 28	29.18	S	S, 8	WSW	SSW, 8	S-SW.
Atago Maru, Jap. M. S.	do.	San Francisco	47 35 N	176 00 W	Aug. 29	2 p., 30	Aug. 31	28.91	SSE	SW, 8	W	SW, 9	
Brunswick, Pan. M. S.	Sydney, N. S. W.	Los Angeles	13 33 N	143 22 W	Aug. 30	11 p., 30	do.	28.82	NE	N, 11	SE	N, 11	N-NW-W.
SOUTH PACIFIC OCEAN													
Laurel, Swed. M. S.	San Pedro	Port Lyttelton	36 50 S	177 10 W	Aug. 1	8 p., 1	Aug. 2	29.46	WNW	W, 10	WSW	W, 10	Steady.
Golden Eagle, Am. S. S.	Los Angeles	Melbourne	21 14 S	179 38 W	Aug. 4	11 p., 4	Aug. 6	29.76	SE	SE, 8	SE	SE, 9	
Do.	do.	do.	36 46 S	162 51 E	Aug. 13	9 p., 13	Aug. 14	29.88	N	NNW, 7	NW	NNW, 8	NNW-NW.
INDIAN OCEAN													
Fairfield City, Am. S. S.	Manila	Aden	11 55 N	52 45 E	Aug. 6	4 p., 10	Aug. 10	29.56	SW	WSW, 8	SW	SW, 10	

¹ Barometer uncorrected.² Barometer reading approximate.

NORTH PACIFIC OCEAN

By WILLIS E. HURD

Atmospheric pressure.—The north Pacific anticyclone was the controlling factor of the weather during the greater part of August, 1931, over most of the eastern half of the ocean. In the Aleutian and lower Alaskan region pressure for the most part continued little affected by cyclonic influences until after the 20th. About the 22d a tendency toward lower pressures was observed in northern waters, and on the last three days of the month a deep cyclone developed, the minimum barometer reading at Dutch Harbor being 28.82 inches, on the 30th. The average pressure at this station, however, as elsewhere among the northern islands and along the American coast, was above normal for August. At Midway Island the average for the month was below normal, and thence westward to the Asiatic coast pressure generally was comparatively low, owing to the prevalence of numerous cyclonic disturbances in the Far East.

The following table gives barometric data for several island and coast stations in west longitudes, including Point Barrow on the Arctic Ocean:

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean and adjacent waters, August, 1931, at selected stations

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Point Barrow ^{1,2}	29.99	+0.10	30.44	24th	29.70	13th.
Dutch Harbor ¹	29.97	+0.11	30.44	9th	28.82	30th.
St. Paul ^{1,3}	29.93	+0.15	30.28	8th	29.02	30th.
Kodiak ^{1,3}	29.92	+0.06	30.22	8th	29.08	31st.
Midway Island ¹	29.99	-0.09	30.08	10th	29.90	20th. ⁴
Honolulu ⁵	30.01	0.00	30.07	23d	29.90	16th.
Juneau ⁵	30.05	+0.03	30.23	5th	29.66	31st.
Tatoosh Island ^{5,6}	30.10	+0.10	30.27	26th	29.86	9th.
San Francisco ^{5,6}	29.95	+0.03	30.12	14th	29.77	2d.
San Diego ^{5,6}	29.92	+0.03	30.04	31st	29.77	2d.

¹ P. m. observations in averages; a. m. and p. m. in extremes.² For 29 days.³ For 30 days.⁴ And on other date or dates.⁵ A. m. and p. m. observations.⁶ Corrected to 24-hour mean.

Cyclones and gales.—The weather along the upper steamship routes during August may be described as having the inconvenience of low visibility and much fog, though few of